

Serial No. 10/747,746
60130-1623**AMENDMENT****IN THE SPECIFICATION:**

Please amend paragraph 30 as follows:

The pivots 16, 20 move along the support 26 within the common plane 32 in response to movement of the actuator 30. The force gain realized is a factor of the friction force between the rotor 12 and each caliper 14, 18 and the position of the pivots 16, 20. The friction force is dependent on material properties of the friction material 24 and the rotor 12, the force exerted to engage the rotor 12 with the calipers 14, 18, and the position of the pivots 16, 20. The distance 36 between the pivots 16, 20 is adjusted to control the force gain. As the distance 36 increases, the gain in force from self-energization increases, because the rotational moment is magnified. Decreasing the distance 36 decreases the magnitude of force gain from self-energization. The driveactuator 30 adjusts the distance 36 between the calipers 14, 18 to control the magnitude of force gain. The distance 36 correlates to a difference between the contact surface of the rotor 12 and each of the pivots 16, 20. The distance between the contact surface and the pivots 16, 20 generate the gains in braking force. Control of the force gain of the self-energized brake assembly 10 prevents lock up conditions and provides for uniform control of braking forces.

Please amend paragraph 33 as follows:

Rotation of the threaded rod 54 by the drive 56 causes movement of the brake pads 44, 48 into initial contact with the flange 43. Once the brake pads 44, 48 have engaged the flange 43 of the rotor 42, a frictional force generated by the interaction between the brake pads 44, 48 and the flange 43 in the direction indicated by arrow 53 pulls the brake pads 44, 48 in the direction of rotation 45 of the rotor 42. The braking force required to control rotation of the rotor 42 is generated by the frictional forces pulling the brake pads 44, 48 into contact with the rotor 42 with increasing force. The motor 54 need not generate all of the braking force required to control rotation of the rotor 42. The electric motor 56 requires only enough power to apply sufficient force between the brake pads 44, 48 and the rotating memberrotor 42 to initiate brake self-energization.

Serial No. 10/747,746
60130-1623

Please amend paragraph 35 as follows:

Referring to Figures 5A-C, operation of the brake assembly 40 is schematically shown. Rotation of the threaded rod 54 by the actuator 56 moves brake pad segments 68 into contact with the rotor flange 43. The segment 67 of each brake pad 44, 48 pivotally attached to the hinge 58 remains free of contact with the rotor 42. Movement of the drive 56 rotates the threaded rod 54 and moves the ~~segments~~ sections 68 in the direction indicated by arrow 64 toward the rotor 42 (Figure 5A).

Please amend paragraph 37 as follows:

Referring to Figure 5C, disengagement of the brake pads 44, 48 is accomplished by reversing rotation of the threaded rod 54. The brake pads 44, 48 are moved in the direction indicated by arrows 65 away from the rotor [[43]]42. Control of the force gain is provided by selecting a distance 60 corresponding to a desired gain in braking force.

Please amend paragraph 41 as follows:

Engaging the rotor 72 with the brake pads 74, 76 increases braking force above that exerted by the actuator [[98]]92 by pulling the brake pads 74, 76 in the direction of rotation of the rotor 72. As the brake pads 74, 76 move in the direction of rotation of the rotor 72, a distance between each of the brake pads 74, 76 decreases because the pivot arms 80,81,83 and 84 are of fixed length 98 that translates movement in the direction of rotation into movement toward the rotor 72.

Serial No. 10/747,746
60130-1623

Please amend paragraph 46 as follows:

Referring to Figure 9, another a self-energized brake assembly 100 includes pivot arms 110 attached at one segment to a caliper housing [[112]]126 and at a second segment to a brake pad 116. Each of the pivot arms 110 have a common length forming a parallelogram with each brake pad 116. First and second motors 106, 108 drive ball screws 118 toward and away from a rotor 104. The motors 108, 106 are attached to an outer caliper housing 102 and are actuatable to bring each of the brake pads 116 into engagement with the rotor 104.